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On Technology, Information Policy, Intergovernmental Relations and the Census
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"Health Informatics: What is the prescription for success in intergovernmental information sharing and emergency response?"

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Honorable Chairman Putnam and members of the Subcommittee. Good afternoon. I am Gordon Aoyagi, Fire Administrator for the Montgomery County Fire and Rescue Service for Montgomery County, Maryland.

Montgomery County, Maryland is a suburb of Washington, D.C. Our population is over 900,000 and we continue to grow in population and employment. The County is ethnically, culturally and economically diverse and is the most diverse county in the State of Maryland. Our County is home to several federal installations – NIH, NOAA, NIST, NRC, Department of Health and Human Services, Department of Energy - to name a few. Our educational institutions include campuses for the University of Maryland, John Hopkins University and Montgomery College. Our I-270 Technology Corridor is home to several large and emerging biotech companies.

The County is a member of the Washington Metropolitan Council of Governments through which regional partners enjoy strong regional coordination, communication and regional governance. Mutual aide among member local governments is very robust, particularly among fire and rescue departments where resources may flow freely across boundaries upon request.

As the Fire Administrator, I am responsible not only for the operations of the fire and rescue service but also for the County's Office of Emergency Management. I serve as the Disaster Manager when the County's Emergency Management Group activates our Emergency Operations Center during major emergencies or disasters. The Emergency Management Group includes all or most of our over 20 major departments of the County as well as our municipalities, utilities, public schools, community college and volunteer services. A key participant of the Emergency Management Group is the County's Public Health Division.

The Emergency Management Group deals with the mitigation of consequences of a major incident or disaster that exceed the operational response of our unified incident command, support and coordinate with our regional partners in the National Capital Region as well as the State of Maryland and restoration of the physical, social and economic wellbeing of our County . Depending upon the nature of the disaster or incident, we also plan for the coordination and insertion of state and federal support and resources upon declaration of an emergency by our County Executive and our Governor.

Montgomery County has a history of effective emergency management including preparations and response to the Year 2000 computer and infrastructure issues, the September 2001 Pentagon attack, October 2001 Anthrax incidents including medication for Shady Grove Postal employees, the July 2002 Amtrak derailment, the October 2002 sniper attacks and most recently Hurricane Isabel in fall 2003. In addition, we have had numerous exercises for planning and training for field and emergency management group response to incidents involving weapons of mass destruction, including "dirty bombs" and biological agents. We work hard at preparing our first responders, planning for emergency management and informing our residents for the new threat environment that we live in.

We appreciate the opportunity to add the local government and emergency response perspective on the important topic of health informatics and prescriptions for success in intergovernmental information sharing.

Many of the speakers will address the many technology issues involved in health informatics. Local governments, including Montgomery County, have made and continue to make significant investments in the installation, operation and improvements of our public safety communications networks – which include fire, police, transportation and public health. Local funding is supporting our wireless data systems, which we view as still in its infancy. Health informatics, which enhances emergency medical services provided by first responders, will depend upon robust, redundant and reliable wireless data systems. We encourage and endorse continued Congressional support in policy direction and funding for the enhancement of this technology and promoting its delivery for local government applications, which has use not only for heath informatics but also for public safety services. It is the "battlefront" of our local communities, which include federal buildings and installations, where first responders confront the emerging terrorist threats as well as fulfill their daily mission of keeping our communities safe and saving lives.

We also express our appreciation to our Maryland delegation – Senators Sarbanes and Mikulski and our Representatives Van Hollen and Wynn and our former Representative Morella for their cooperation, support and leadership in providing federal funds to assist in the implementation of some of the initiatives described further in this testimony.

Technology infrastructure is a key and vital element for health informatics and represents the necessary components for successful intergovernmental information sharing. But is it sufficient? As a local government emergency manager, let me offer the perspective of other ingredients for success involving the effective use of the information provided in emergency response and action plans. These other ingredients include: planning, collaboration and communications among emergency response providers.

Electronic Surveillance System for Early Notification of Community-based Epidemics – Version II (ESSENCE II) – Application of Health Informatics

First of all, it should be noted that Montgomery County provided the initiative and the test bed for a sophisticated disease surveillance system for the County, which is anticipated to be extended to the State of Maryland and National Capital Region. The Electronic Surveillance System for Early Notification of Community-based Epidemics, Version Two (ESSENCE II) is the first system to integrate both the military and civilian indicators for disease surveillance using traditional and nontraditional health indictors in syndromic groups coupled with advanced analytical techniques. Prior to September 11, 2001, Montgomery County's Public Health Division collected disease outbreak information manually. With funding provided by the 2002 Byrne Grant, the County allocated a portion of these funds for the development of a disease outbreak surveillance system using advanced information technology. The Applied Physics Laboratory (APL) of Johns Hopkins University developed ESSENCE II in collaboration with the DOD Global Emerging Infections Systems and the cooperation with our five private, non-profit hospitals, the State of Maryland Department of Health and Mental Hygiene, and other health care providers, including fire and rescue.

ESSENCE I is a worldwide military Syndromic surveillance system operated by the DOD Global Emerging Infections System. ESSENCE II obtains additional data from community sources and integrates both military and civilian health care indicators. Information sources include hospital laboratory results and encounters with health care professionals. Other data sources include 911 calls, EMS transports, nurse hotline calls, poison center calls, visits to private practice physicians and military clinics, emergency room visits, prescription medication purchases, over the counter (OTC) drug purchases, veterinary clinic calls and services and public school absenteeism patterns. Variables include the weather, seasonal promotions, community events and local and international news. Baseline data is projected and any unusual spikes in syndrome groupings are subject to further review and analysis by the County's highly trained epidemiologists.

ESSENCE II alerting notification protocols are established for public health officials, emergency rooms, urgent care providers and emergency service responders in the County, the National Capital Region, the State of Maryland and federal government.

Planning

Prior to 9/11 and the anthrax attacks, we had been concerned with the possibilities of bio-terrorist incidents and there was also discussion of the possible return of pandemic

flu outbreaks during the first part of new century. The Emergency Management Group established a Bio-Terrorism Task Force, consisting of fire, police, public health, transportation, environmental protection, schools and sheriff representatives. Public health represented disease control as well as health care providers, including the hospitals. Early planning efforts, discussion of respective roles and relationship building developed a unified command system for bioterrorist incidents. This framework facilitated the County's immediate and effective response to the anthrax incidents of 2001. The Bio-Terrorism Task Force developed 911 call taking protocols, a bioterrorism community hotline, HAZMAT strike team, health care clinic assessment center, communication network with health care providers and businesses, a framework for responding to request from the Shady Grove Postal facility for medication distribution and information coordination from State, Federal and other local sources for the County Executive's announcements and directions to the public.

This task force continues in operation. It developed and implemented pre-distribution of bio-medical packs to our first responders. Information has been provided to first responder families to notify and consult with their family physicians about their spouse or family member being a first responder and the need to receive preventive medication by prescription when an event occurs. The task force focused upon the SARS epidemic and is developing appropriate response actions plans for notification, isolation, quarantine and first responder protocols and protections. Additionally, the task force continues to work on and support the NIMS structure for incident command for public health events, the operations and logistics for receipt of the Strategic National Stockpile, distribution of medical supplies and equipment and the operation of medical dispensing sites.

Collaboration

Response to major disease outbreaks, naturally occurring or induced through the release of biological agents or community disasters, place great strain on primary health care providers, our hospitals. They are key elements of the emergency response system for major disasters.

In Montgomery County, we have included our five hospitals in our 800 MHz radio system. The hospitals administrators can talk to each other, public health representatives, our pubic safety communications center (fire, police and transportation) and the incident commander. This hospital radio net is tested frequently and provides essential as well as redundant communications.

Collaboration has also occurred to have our fire and rescue HAZMAT team provide direct hands-on training to emergency room and hospital staff on decontamination protocols and equipment. Our hospitals have agreed to purchase the same decontamination equipment and jointly train with fire and rescue. This assures mutual knowledge of capabilities and equipment and seamless support of fire and rescue personnel for hospital decontamination activities of persons entering or leaving facilities.

In addition, we have recently executed a Memorandum of Understanding between the County and our five private, non-profit hospitals, NIH, Naval Medical and Kaiser Permanente to rapidly provide supplies, equipment and credentialed medical personnel to hospital(s) receiving disaster patients. Protocols were established for hospital incident command for managing logistics and operations for sending and receiving hospitals to receive, to divert and to offload patients to maximize medical services during emergencies in the County and in the region. This framework acknowledges that surge capacity is not just a matter of providing additional beds for patient care.

Communication Systems

Once surveillance information is obtained, notifications of emergency responders and health care providers must be in place to facilitate information sharing laterally and horizontally. Laterally, our Public Health Division utilizes email and "hot faxes" to provide public health alerts to physicians and clinics. The 800 MHz radio net provides immediate notification to our local hospitals. The Regional Information Coordination and Communication System (RICCS) operated by the MWCOG provides for the notification of policy leaders and other regional health care providers.

To assist hospitals and emergency managers in assessing hospital resources throughout the State, the Maryland Institute for Emergency Medical Services Systems (MIEMSS) operates a Facilities Resource Emergency Data Base (FRED) to provide macro-views of hospital capabilities as well as micro-reports of inventory of critical supplies and equipment. FRED also provides a secure method of notification of events and situational updates to hospitals throughout the State. FRED is operated by the Emergency Medical Resource Center which may also provide directions on bed availability at specific hospitals in the State and coordinate with helicopter transport.

It should be noted that while fire and rescue personnel are involved in medical triage and transport, should the event involve a specific incident and location, law enforcement personnel will support the incident through security and evidence gathering. Upon completion of emergency medical and rescue mitigation activities, the scene transitions to law enforcement for investigation and coordination with public health officials.

In closing, I believe that prescriptions for success for health informatics in our region involve:

- recognition of and the on-going federal support of the roles and responsibilities of local governments in responding to disasters and emergencies as first responders;
- enabling of technology transfer to public health, health care and emergency medical providers at the local level through development and funding of infrastructure and effective health informatics systems;
- funding for the development and continuous improvement of robust, reliable and redundant wireless data technology to support health care and emergency medical providers; and

- Coordinated, collaborative and integrated planning and response systems among public health, public safety, hospitals and emergency management agencies at the local, regional state and federal levels.

Thank you.